



BUTTERFLY VALVES CATENA



Valve

CDG Valve Manufacturer

®CDG Valve Manufacturer

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Valve

CDG Valve Manufacturer

BU



COMPANY HISTORY

- 1963 : Founded CDG.
- 1985 : CDG brand creation.
- 1989 : Production of pneumatic actuators, and Italy FABIA to establish acooperation.
- 1992 : With the United States FAIRCHILD cooperation, Production of electric actuators.
- 2001 : Focus on the production and assembly of CDG.
- 2005 : Production of hydraulic actuators.
- 2006 : Production of valves.
- 2011 : Oil station development and use.
- 2016 : Set up a number of representative offices in China.

Company introduction

The CDG is a famous valve manufacturers, the company is headquartered in America's largest city, Detroit, Michigan is located in the northeastern United States, Canada, Detroit river north of Windsor an important port city. With strong industrial base and freight advantage.

CDG products have unique design, short delivery time, competitive price and excellent after-sales support. As a professional manufacturer of valves, it quickly became the industry leader.

CDG has more than 50 years experience in the valve industry. The r&d department USES these experiences to constantly design new products, improve existing products, and adapt to changing market demands and constantly improving international standards.

CDG can provide standard and non-standard solutions that can be customized according to customer needs.

CDG has created a wide range of reliable products. CDG is favored and admired by the world's leading EPC and oil and gas companies because of its high performance in extreme conditions. Its products are

used in power plant, petrochemical, metallurgy, papermaking, automobile and more Product certification based on customer requirements and government legislation is a guarantee of product quality. CDG USES advanced testing laboratories to ensure the durability of its products. Fire safety, high temperature and low temperature testing can be carried out under extreme conditions.

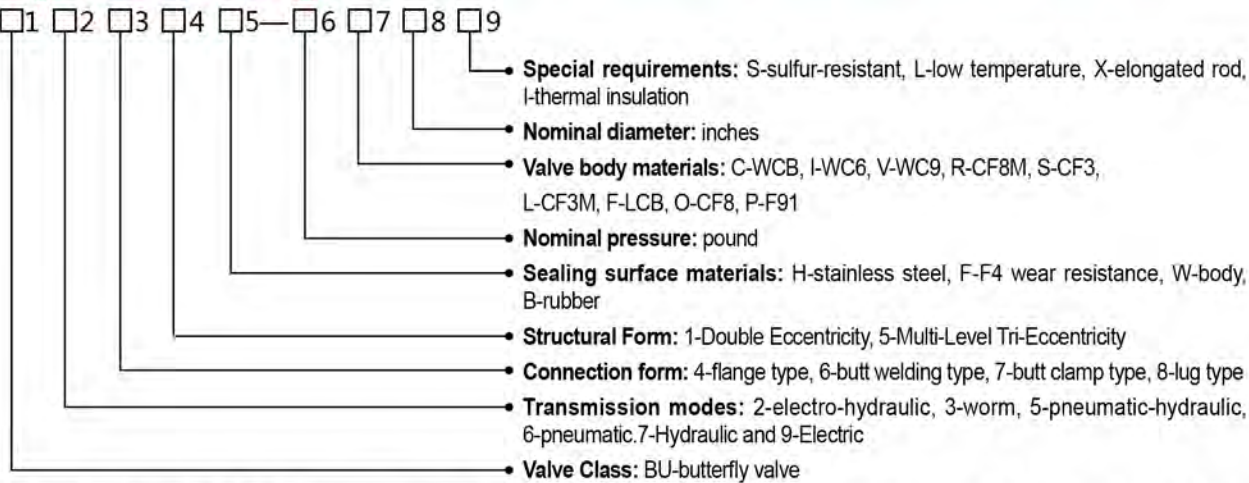
CDG good position, provide comprehensive after-sales support, fast, efficient, with unparalleled expertise. Our skilled engineers and technicians work 24 hours a day to respond to customer queries, solve problems, and provide reliable solutions. A comprehensive after-sales service creates a complete solution, customer support, covering all requirements.

CDG is a long-term, reliable, available and cost- effective partner for your existing and new business.

CDG brand is comprehensive, including valve and oil station, pneumatic actuator, electric actuator and hydraulic actuator and other related fields. To enable CDG to meet different needs it can be sold separately, and can be matched in a complete set, so that users can reduce their worries.

CDG butterfly valves are divided into soft-sealed butterfly valves and hard-sealed butterfly valves.

Figure numbering



Soft-sealed butterfly valve is a component used to cut off and control the flow of pipeline system. It is usually used in oil, chemical industry, natural gas, metallurgy, power, medicine, water supply and drainage, gas pipeline to regulate flow and cut off fluid. The sealing materials are rubber, polytetrafluoroethylene, etc. Our company independently developed soft-sealed butterfly valve uses double eccentric butterfly valve structure, uses a sealing ring with memory characteristics to wrap the composite structure seat of energy-increasing ring, and uses flexible sealing technology to eliminate the impact of abrasion, plastic deformation, temperature and pressure changes, so as to achieve reliable sealing. The valve has compact structure, light weight and reliable sealing. Compared with traditional valves, it is easy to install, maintain and service life is longer. It is widely used in the occasion of continuous adjustment or switch operation in the automatic control system of production process.

Technical characteristics

Unique Seat Structure

1. Two-way elastic seal, two-way zero seal;
2. Automatic compensation for temperature and pressure changes;
3. The adjusting range of the sealing pair which forms an effective seal is large.

Design of Double Eccentric Butterfly Plate

1. No contact between seat and butterfly plate during the whole opening process
2. No wear point at the upper and lower parts of the seat
3. Low operating torque

Easy maintenance and repair of valve seat

1. The valve seat can be replaced without removing the butterfly plate and stem.

Cut-off and control

1. Excellent control characteristics
2. Equal Ratio Change of Flow Characteristic Curve
3. Wide range of regulation
4. Effective sealing for control

Fire prevention structure

1. Fire-proof valves meet API 607 and BS6755 Part II

technical specifications

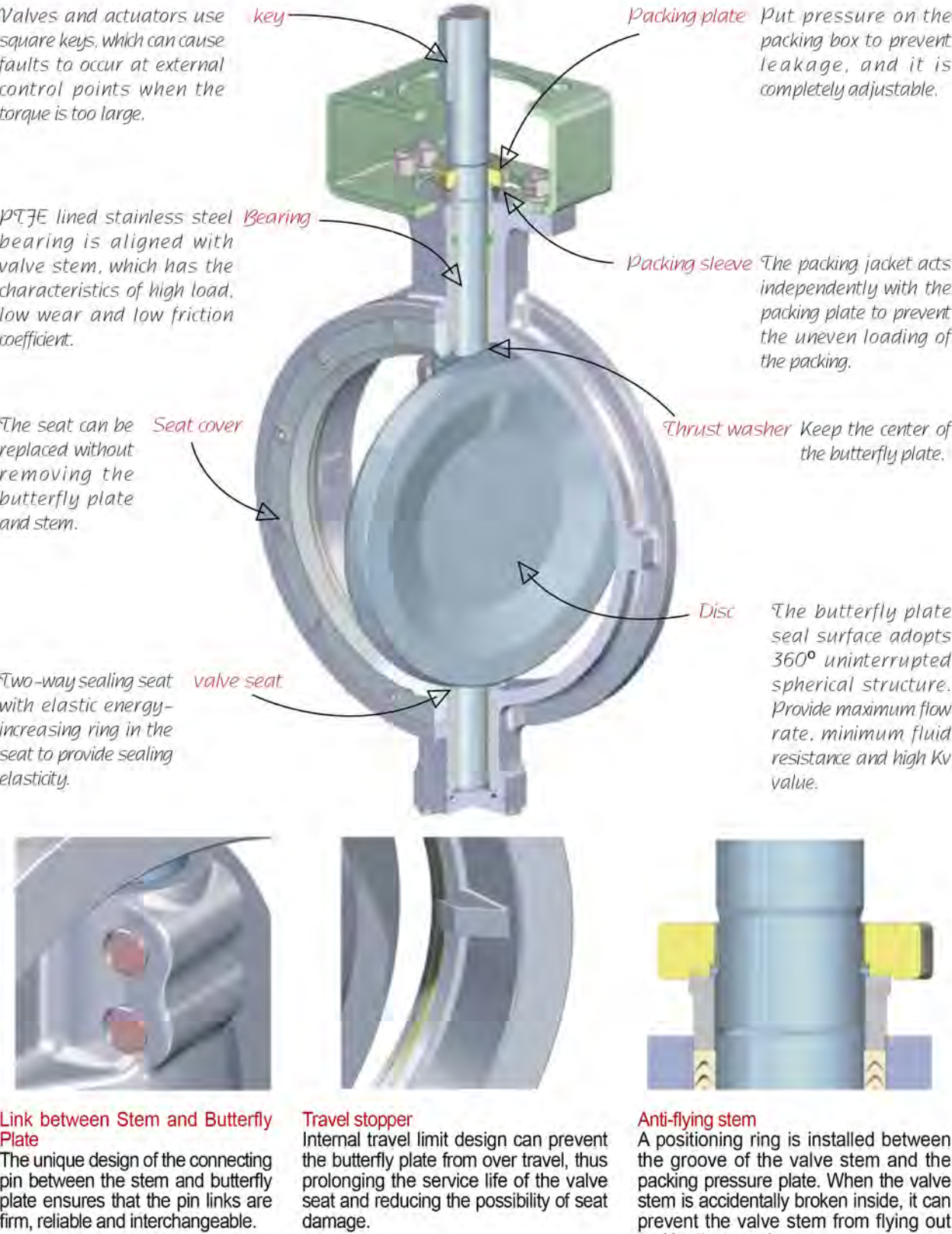
structure

Pressure level and specification
ANSI CL150 NPS2 "-NPS60"
ANSI CL300 NPS3 "-NPS60"
ANSI CL600 NPS4 "-NPS24"
Body material: WCB CF8M
Sealing ring: PTFE/RPTFE/ silicone rubber energy-enhancing ring
Structure length: API609 compliant

Driving mode

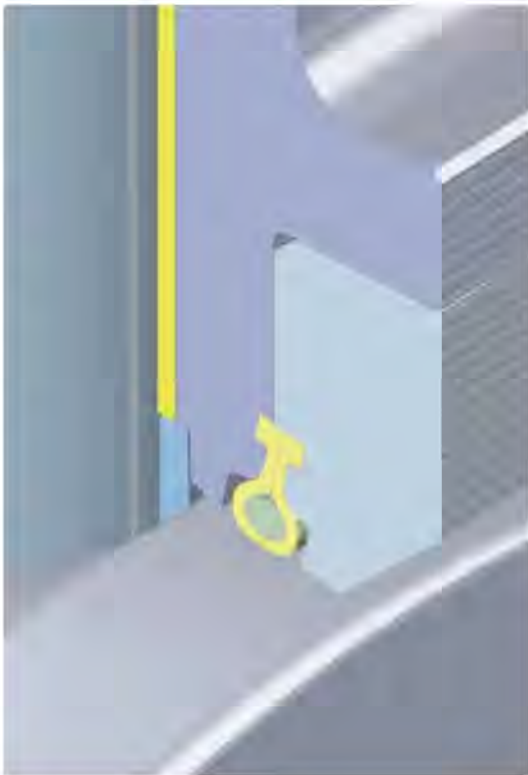
2 "-8" butterfly valve can be opened and closed with a handle, and can be partially opened. The locking device on the handle can lock the butterfly plate at any position with 10% of the opening and closing distance. Manual worm gear drive device can open the valve to any middle position, and it can also be operated conveniently at high pressure difference. Safe double-acting pneumatic and electric devices are selected to automatically control valve operation. When proportional flow control is needed, the corresponding actuator and locator can be selected.

Mechanism characteristics



Two-piece seat with unique structure consists of seat wrapped elastic ring. This simple and reliable design has many unique advantages.

- 1. Elastic booster ring is wrapped by valve seat to completely isolate pipeline media.
- 2. The grooves and teeth design on the body and seat cover effectively ensure that the seat is well fixed in the desired position at any time.
- 3. Seat cover is bolted to the body to lock the seat in the correct position. The seat can be secured reliably even without a paired flange.
- 4. Reliable fixed and well supported seats rely on butterfly plate and medium pressure to enhance sealing capacity. When the pressure of the pipeline increases, the sealing performance of the pipeline increases accordingly. In the low pressure or vacuum state, the seat can provide superior sealing performance through its own memory characteristics.
- 5. It has the function of zero leakage and two-way sealing.
- 6. The memory characteristics of the seat can be self-regulated according to wear and temperature changes, maintaining a stable sealing throughout.
- 7. Quick and simple seat replacement process can be accomplished by unloading the retaining ring, turning the valve plate to the closed position and replacing the new seat into the groove of the valve body. Simple and fast, without affecting butterfly plate, valve stem and other components.



Valve closing medium flows from left to right
The valve seat moves in the direction of medium flow and is pressed on the butterfly plate to tightly prevent leakage. The higher the pipeline pressure, the tighter the seal between the seat and butterfly plate.

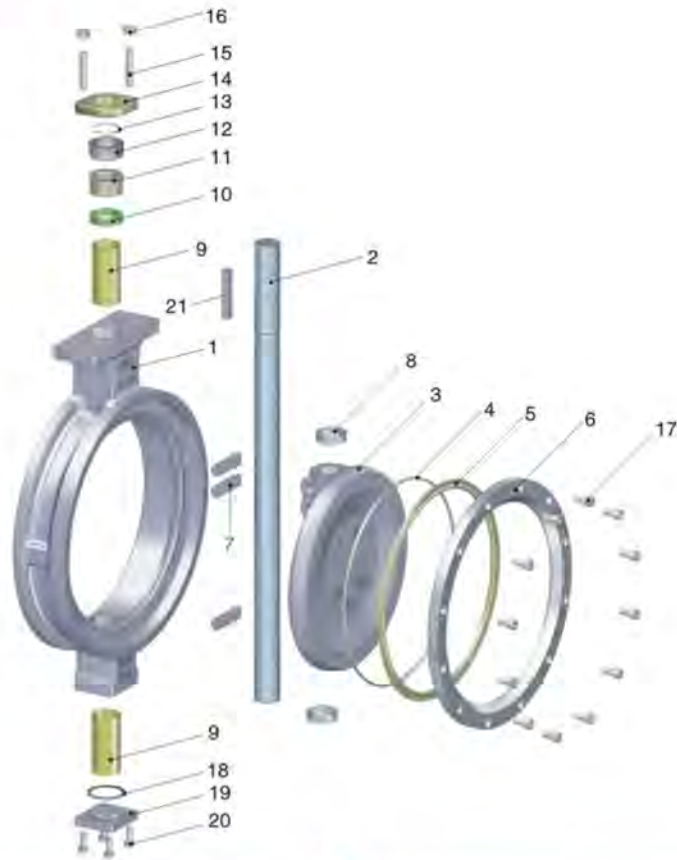


Valve closing medium flows from right to left
The valve seat moves along the flow direction of the medium and is close to the butterfly plate to ensure the reliability of the bidirectional seal. It has reliable sealing performance from vacuum to high pressure.



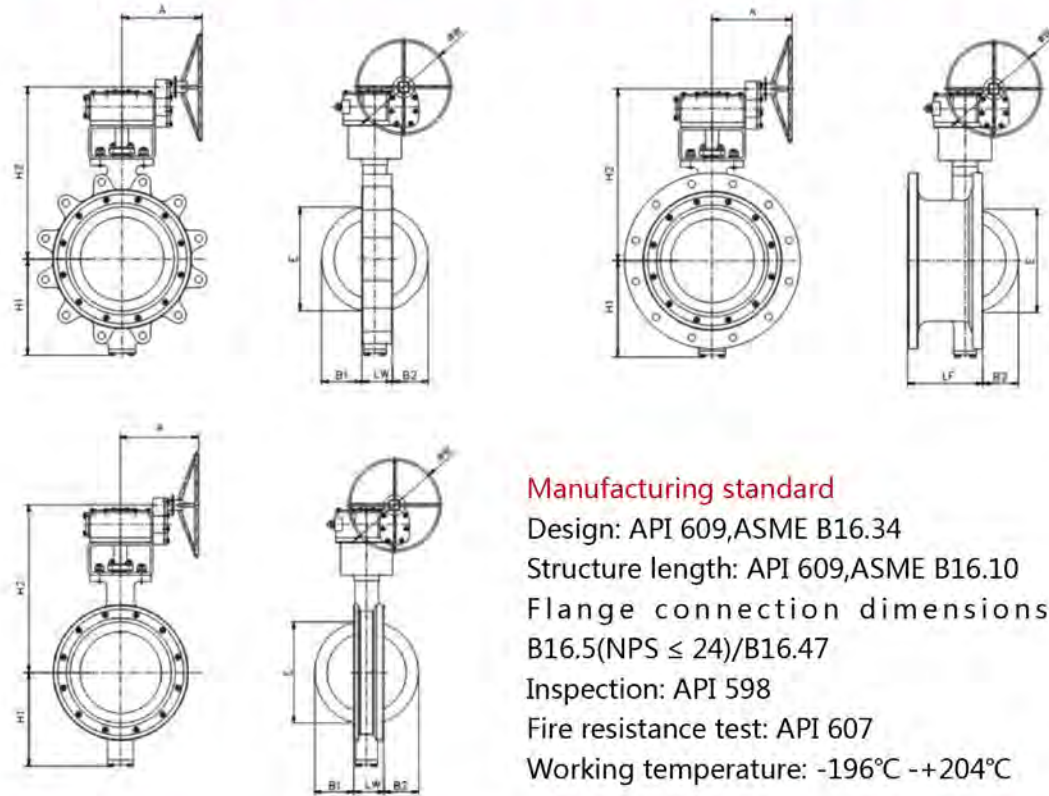
Fire Safety Seat Structure
Under normal conditions, both the elastic seat and the metal seat of the seat assembly are in contact with the butterfly plate at the same time. In case of fire, when the elastic seat is partially or completely damaged, the metal seat always keeps stable contact with the butterfly plate. Reliable seals can be provided regardless of the flow direction of the medium.

Structural drawing



Serial number	Name	Material Science		Serial number	Name	Material Science	
1	valve body	A216 WCB	A351 CF8M	12	Packing sleeve	A276 304	A276 316
2	Stem	A564 630	A564 630	13	Fly proof collar	A276 304	A276 316
3	Disc	A216 WCB+316	A351 CF8M	14	Packing plate	A216 WCB	A351 CF8M
4	Energy increasing ring	FPM	FPM	15	Hexagon nut	A194 2H	A194 8
5	Seal ring	RPTFE	RPTFE	16	Full tooth stud	A193 B7	A193 B8
6	Seat pressure plate	A105	F316	17	Internal hexagonal screw	A193 B8	A193 B8M
7	Bevel pin	A564 630	A564 630	18	Spiral wound gasket	304+PTFE	316+PTFE
8	Thrust washer	A276 304	A276 316	19	Bottom cover	A105	F316
9	Radial bearing	A240 304+PTFE	A240 316+PTFE	20	Hexagon headed bolt	A193 B7	A193 B8M
10	Stuffing pad	A276 304	A276 316	21	key	A576 1045	A576 1045
11	V packing	RPTFE	RPTFE				

Flange, clamp and lug double eccentric soft sealing butterfly valve



Manufacturing standard

Design: API 609, ASME B16.34

Structure length: API 609, ASME B16.10

Flange connection dimensions: ASME B16.5 (NPS ≤ 24) / B16.47

Inspection: API 598

Fire resistance test: API 607

Working temperature: -196°C ~ +204°C

BU371^F₈-150Lb C.P. Flange, clamp and lug double eccentric soft sealing butterfly valve

NPS	LF(inch/mm)	LW(inch/mm)	H1(inch/mm)	H2(inch/mm)	B1(inch/mm)	B2(inch/mm)	E(inch/mm)	A(inch/mm)	W(inch/mm)
2"	1.69/43	3.15/80	6.73/171	0.47/12	0.28/7	1.89/48	6.26/159	5.91/150	
2.5"	1.81/46	3.74/95	7.87/200	0.59/15	0.45/11.5	2.36/60	6.26/159	5.91/150	
3"	4.49/114	1.89/48	4.13/105	7.91/201	0.77/19.5	0.61/15.5	2.87/73	6.26/159	5.91/150
4"	5.00/127	2.13/54	4.72/120	8.78/223	1.02/26	0.87/22	3.78/96	6.26/159	5.91/150
5"	5.51/140	2.20/56	5.31/135	9.06/230	1.65/42	1.26/32	4.53/115	6.26/159	5.91/150
6"	5.51/140	2.24/57	5.71/145	9.49/241	1.97/50	1.57/40	5.79/147	6.26/159	5.91/150
8"	5.98/152	2.52/64	7.28/185	11.73/298	2.64/67	2.44/62	7.60/193	6.38/162	7.87/200
10"	6.50/165	2.80/71	8.66/220	14.33/364	3.62/92	3.07/78	9.53/242	8.66/220	13.78/350
12"	7.01/178	3.19/81	10.04/255	16.42/417	4.33/110	3.82/97	11.30/287	9.02/229	13.78/350
14"	7.48/190	3.62/92	11.38/289	17.80/452	4.72/120	4.09/104	12.52/318	9.02/229	18.11/460
16"	8.50/216	4.02/102	12.95/329	20.16/512	5.59/142	4.84/123	14.45/367	14.17/360	23.62/600
18"	8.74/222	4.49/114	13.94/354	21.14/537	6.22/158	5.75/146	16.46/418	15.83/402	23.62/600
20"	9.02/229	5.00/127	15.71/399	26.02/661	6.97/177	6.30/160	18.31/465	20.47/520	23.62/600
24"	10.51/267	6.06/154	17.91/455	28.39/721	8.11/206	7.99/203	22.95/583	20.47/520	23.62/600
28"	11.50/292	6.50/165	20.28/515	34.06/865	10.83/275	9.29/236	26.65/677	21.38/543	29.53/750
30"	12.52/318	7.48/190	21.69/551	35.31/897	10.12/257	10.00/254	27.56/700	21.38/543	29.53/750
32"	12.52/318	7.48/190	22.83/580	32.95/837	11.46/291	11.18/284	30.16/766	23.78/604	29.53/750
36"	12.99/330	7.99/203	25.67/652	37.36/949	13.19/335	12.99/330	34.17/868	23.78/604	29.53/750
40"	16.14/410	8.50/216	28.15/715	39.25/997	14.41/366	13.78/350	37.60/955	23.78/604	29.53/750
42"	16.14/410	8.50/216	29.13/740	40.28/1023	15.83/402	15.20/386	39.37/1000	25.31/643	29.53/750
48"	18.50/470	10.00/254	32.64/829	43.11/1095	18.27/464	18.27/464	46.30/1176	25.31/643	29.53/750

BU371^F₈-300Lb C.P. Flange, clamp and lug double eccentric soft sealing butterfly valve

NPS	LF(inch/mm)	LW(inch/mm)	H1(inch/mm)	H2(inch/mm)	B1(inch/mm)	B2(inch/mm)	E(inch/mm)	A(inch/mm)	W(inch/mm)
3"	4.49/114	1.89/48	4.72/120	8.27/210	0.79/20	0.63/16	2.91/74	6.26/159	5.91/150
4"	5.00/127	2.13/54	5.71/145	9.65/245	1.14/29	0.94/24	3.82/97	6.26/159	5.91/150
6"	5.51/140	2.32/59	7.09/180	12.60/320	2.01/51	1.61/41	5.75/146	6.38/162	7.87/200
8"	5.98/152	2.87/73	8.27/210	14.57/370	2.76/70	2.09/53	7.64/194	8.66/220	13.78/350
10"	6.50/165	3.27/83	9.65/245	17.52/445	3.54/90	2.80/71	9.61/244	9.02/229	18.11/460
12"	7.01/178	3.62/92	11.42/290	30.71/780	4.33/110	3.54/90	11.42/290	14.17/360	23.62/600
14"	7.48/190	4.61/117	12.80/325	20.67/525	4.25/108	3.90/99	12.52/318	15.83/402	23.62/600
16"	8.50/216	5.24/133	14.37/365	23.03/585	4.80/122	4.57/116	14.33/364	20.47/520	23.62/600
18"	8.74/222	5.87/149	15.55/395	25.20/640	5.55/141	5.04/128	16.30/414	20.47/520	23.62/600
20"	9.02/229	6.26/159	16.73/425	28.94/735	5.79/147	5.28/134	17.95/456	21.38/543	29.53/750
24"	10.51/267	7.13/181	19.88/505	12.01/305	7.52/191	7.17/182	21.73/552	23.78/604	29.53/750
30"	12.52/318	9.49/241	24.41/620	37.40/950	9.13/232	8.82/224	28.74/730	25.31/643	29.53/750
36"	12.99/330	9.49/241	27.95/710	42.52/1080	12.17/309	11.81/300	35.00/889	25.98/660	29.53/750
40"	16.14/410	11.81/300	28.74/730	59.25/1505	13.35/339	12.72/323	37.40/950	29.69/754	31.50/800
48"	18.50/470	13.78/350	32.68/830	63.98/1625	17.40/442	16.69/424	43.31/1100	33.66/855	31.50/800

BU371^F₈-600Lb C.P. Flange, clamp and lug double eccentric soft sealing butterfly valve

NPS	LF(inch/mm)	LW(inch/mm)	H1(inch/mm)	H2(inch/mm)	B1(inch/mm)	B2(inch/mm)	E(inch/mm)	A(inch/mm)	W(inch/mm)
4"	7.48/190	2.52/64	6.30/160	10.43/265	0.98/25	0.59/15	3.82/97	6.38/162	7.87/200
6"	8.27/210	3.07/78	9.06/230	14.17/360	1.69/43	1.54/39	5.79/147	9.02/229	13.78/350
8"	9.06/230	4.02/102	9.84/250	16.14/410	2.09/53	1.61/41	7.44/189	14.17/360	23.62/600
10"	9.84/250	4.61/117	12.40/315	18.90/480	2.80/71	2.80/71	9.17/233	15.83/402	23.62/600
12"	10.63/270	5.51/140	13.58/345	22.44/570	3.46/88	3.07/78	10.83/275	20.47/520	23.62/600
14"	11.42/290	6.10/155	14.96/380	23.62/600	3.62/92	3.23/82	11.18/284	20.47/520	23.62/600
16"	12.20/310	7.01/178	16.54/420	25.59/650	3.78/96	3.54/90	12.44/316	21.38/543	29.53/750
18"	12.99/330	7.87/200	18.50/470	26.77/680	4.65/118	4.29/109	15.00/381	25.31/643	29.53/750
20"	13.78/350	8.50/216	20.08/510	28.15/715	5.00/127	4.65/118	16.57/421	25.31/643	29.53/750
24"	15.35/390	9.13/232	21.65/550	32.28/820	5.79/147	5.79/147	20.08/510	25.31/643	29.53/750



Opening and closing torques N.m (including safety factor) selected by actuators

BU371⁴₈^F-150Lb C.PFlange, clamp and lug double eccentric soft sealing butterfly valve

NPS	<10.3Bar		>10.3-14Bar		>14-17.2Bar		>17.2-20Bar	
	正向	反向	正向	反向	正向	反向	正向	反向
2"	14	17	15	20	17	23	18	25
2.5"	17	21	20	25	22	29	23	31
3"	19	23	22	27	23	31	24	33
4"	28	33	31	38	33	43	33	47
5"	56	66	66	82	73	96	75	107
6"	71	84	79	98	85	113	86	124
8"	132	155	144	175	155	200	161	216
10"	247	288	374	339	290	387	295	421
12"	356	417	407	509	447	600	463	662
14"	549	641	602	752	651	865	676	967
16"	783	925	920	1149	1027	1373	1068	1526
18"	1211	1424	1383	1729	1526	2034	1566	2237
20"	1556	1831	1739	2166	1882	2512	1922	2746
24"	2507	2949	2815	3519	3051	4078	3132	4475
28"	3544	4170	3824	4780	4505	6021	4526	6458
30"	4063	4780	4369	5461	5166	6885	5340	7628
32"	4577	5390	4963	6204	5858	7810	5980	8543
36"	5492	6509	6590	8238	7475	9967	7831	11187
40"	6305	7424	7485	9356	8391	11187	8614	12306
42"	7221	8441	8543	10679	9687	12916	10272	14543
48"	9967	11696	12367	15458	14493	19323	15449	22069

BU371⁴₈^F-300Lb C.PFlange, clamp and lug double eccentric soft sealing butterfly valve

NPS	<10.3Bar		>10.3-24Bar		>24-38Bar		>38-51Bar	
	正向	反向	正向	反向	正向	反向	正向	反向
3"	19	23	32	40	41	55	51	72
4"	28	33	43	55	56	75	72	103
6"	87	103	136	169	177	237	216	308
8"	163	190	255	319	332	442	380	545
10"	288	339	452	566	586	782	720	1028
12"	432	509	675	844	878	1170	1068	1526
14"	743	875	1090	1363	1393	1861	1566	2237
16"	1211	1424	1750	2187	2217	2949	2705	3865
18"	1556	1831	2197	2746	2756	3671	3204	4577
20"	2075	2441	2990	3732	3763	5014	4343	6204
24"	3285	3865	4638	5797	5848	7800	6764	9662
30"	6916	8136	10333	12916	13119	17492	14950	21357
36"	10287	12102	14645	18306	18306	24408	20645	29493
40"	11757	13831	17086	21357	22577	30103	28334	40477
48"	12967	15255	22130	27662	32346	43528	41006	58579

BU371⁴₈^F-600Lb C.PFlange, clamp and lug double eccentric soft sealing butterfly valve

NPS	<10.3Bar		>10.3-41.4Bar		>41.4-72.4Bar		>72.4-102Bar	
	正向	反向	正向	反向	正向	反向	正向	反向
4"	87	98	132	165	163	216	196	278
6"	149	175	263	329	355	473	421	596
8"	360	421	592	741	782	1038	1007	1440
10"	730	854	987	1234	1389	1851	1727	2468
12"	1038	1213	1152	1440	2006	2674	2159	3085
14"	1224	1440	1975	2468	2550	3393	3085	4422
16"	1424	1679	2888	3611	3509	4678	4628	6611
18"	1648	1932	3498	4373	4983	6611	6549	9356
20"	2166	2543	4638	5797	6712	8950	8848	12611
24"	3356	3966	7221	9051	9560	12713	12509	17798

Hard-sealed butterfly valve consists of valve body, butterfly plate, sealing ring, transmission mechanism and other main components. The mechanism is designed based on three-dimensional eccentricity principle, so that the butterfly valve can reduce its torque and save energy. At the same time, it ensures the reliability of the butterfly valve against corrosion, high temperature and wear. The commonly used installation forms of hard seal butterfly valve are double flange type, lug type, butt clamp type and butt welding type.

Structural characteristics

1. Unique structure, small and portable, flexible operation, labor-saving and convenient;
2. Reliable sealing, which can meet all levels of standards;
3. It has good flow characteristics and regulation function.
4. The eccentricity principle is adopted to make the sealing surface nearly zero wear and prolong the service life of the valve.
5. It can be used in water, steam, oil, air, gas and other media.
6. Suitable for pipelines of different temperature, grade, corrosion and other working conditions.
7. Tri-eccentric hard-sealed butterfly valve. The valve body and seat are connected components. The sealing surface layer of the valve seat is surfacing welded with heat-resistant and corrosion-resistant alloy materials.
8. Three eccentricities: the axis center line deviates from the central line of the sealing surface, the axis center line slightly deviates from the central line of the pipeline, and the center line of the sealing surface (oblique cone) of the valve body and the central line of the pipeline form an angular position with an angle of β .
9. The multi-layer sealing ring is fixed on the valve plate, which has the advantages of high temperature resistance, easy operation, no friction in opening and closing. When closing, it compensates for the sealing with the increase of the torque of the transmission mechanism, and improves the sealing performance and prolongs the service life of the butterfly valve.
10. The multi-layer sealing ring adopts soft and hard laminated metal sheet, which has the double advantages of hard metal seal and soft seal. It has zero leakage sealing performance at low temperature and high temperature.

design code

- Design criteria: API 609
- Structure length: API 609、ASME B16.10
- Connection criteria: ASME B16.5、ASME B16.47、ASME B16.25
- Inspection and testing: API 598
- Pressure and temperature grades: ASME B16.34

performance parameter

- Main material: carbon steel, stainless steel, alloy steel
- Nominal Path: NPS3"-NPS120"
- Pressure range: CL150-CL1500
- Working temperature: -196℃ -+600℃
- Scope of application: It is suitable for flow regulation and reliable truncation of fluids in petrochemical, power plant, steel plant, food, medical, industrial environmental protection water treatment and urban construction pipelines.

Main technical parameters

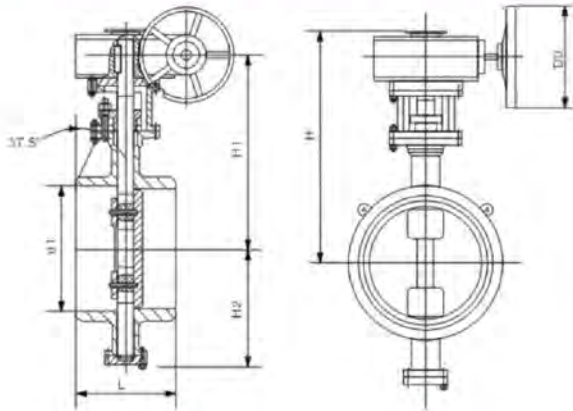
Nominal diameter	NPS(inch)	2"~36"	2"~36"
Nominal pressure	PN(Lb)	150Lb	300Lb
Test pressure Ps (Lb)	strength test Shell test	300Lb	400Lb
	Sealing test Seal test	300Lb	400Lb
Applicable temperature		-29~350℃	

Material for Main Parts and Applicable Medium

Material type Name	Carbon steel type ≤ 425℃	High Temperature and High Pressure Type ≤ 570℃	Stainless steel P-type ≤ 200℃	Stainless steel R-type ≤ 200℃	High temperature type I ≤ 550℃	High temperature type II ≤ 600℃ ~ 850℃
valve body	WCB	WC6 and WC9 chromium-nickel- titanium steels	Ci Ni Ti	Ci Ni Ti	Chrome titanium steel	Chromium-nickel-titanium steel, chromium-silicon-molybdenum steel, ultra-low, carbon steel, dual- phase steel, high chromium-nickel steel
Disc	WCB+Stainless Steel	Chromium Nickel Titanium Steel+6	Chromium Nickel Titanium Steel+6	Chromium Nickel Titanium Steel+6	Chromium Nickel Titanium Steel+6	Chromium-nickel-titanium steel, chromium-silicon-molybdenum steel, ultra-low, carbon steel, dual- phase steel, high chromium-nickel steel+6
Seat ring	WCB+Stainless Steel	Chromium Nickel Titanium Steel+6	Chromium Nickel Titanium Steel+6	Chromium Nickel Titanium Steel+6	Chromium Nickel Titanium Steel+6	Chromium-nickel-titanium steel, chromium-silicon-molybdenum steel, ultra-low, carbon steel, dual- phase steel, high chromium-nickel steel+6 alloy
Valve shaft	Stainless steel	Chromium molybdenum steel	Chromium molybdenum steel	Chromium Nickel Titanium Steel+6	Chromium Nickel Titanium Steel+6	Chromium-nickel-titanium steel, chromium-silicon-molybdenum steel, ultra-low
Axle sleeve	Bronze or stainless steel	Stainless steel + graphite	Stainless steel + graphite	Stainless steel + graphite	Stainless steel + graphite	Carbon steel, dual phase steel, high chromium nickel steel
Shim	Stainless steel + graphite	Stainless steel + flexible graphite	Stainless steel + graphite	Stainless steel + graphite	Stainless steel + graphite	Stainless steel + graphite
filler	Flexible graphite	Flexible graphite	Flexible graphite	Flexible graphite	Flexible graphite	Flexible graphite
Bolt	Level 8.8	CrMoV	Stainless steel	Stainless steel	Heat-Resisting Stainless Steels	Heat-Resisting Stainless Steels
Nut	Level 6.8	Chromium molybdenum steel	Stainless steel	Stainless steel	Heat-Resisting Stainless Steels	Heat-Resisting Stainless Steels
Applicable medium	Water vapor, oil products	Water, steam, etc.	Nitric acid corrosion medium	Acetic acid corrosion medium	High temperature petroleum, etc.	High temperature corrosive medium



Butt-welded multi-level three-eccentric metal hard-sealed butterfly valve



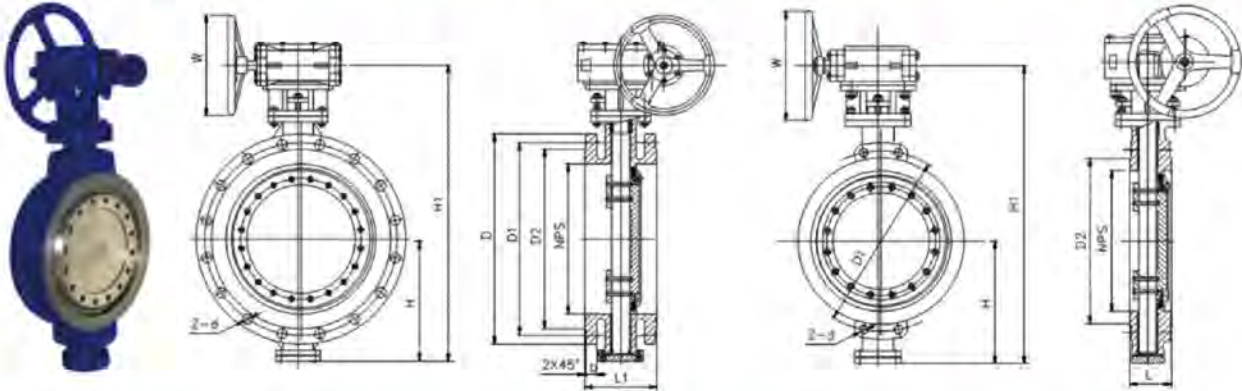
BU365^H -150Lb C.P.R.V Butt-welded multi-level three-eccentric metal hard-sealed butterfly valve

Nominal diameter NPS	Output Torque N.m (Including Safety Factor)	Maximum stem Diameter mm	L(inch/mm)	d1(inch/mm)	H1(inch/mm)	H2(inch/mm)	H(inch/mm)	D0(inch/mm)	Approximate weight(kg)
3"	120	18	7.09/180	2.99/76	7.32/186	3.54/90	9.06/230	6.30/160	27
4"	180	18	7.48/190	5.00/127	7.68/195	3.94/100	9.41/239	6.30/160	34
6"	500	22	8.27/210	6.06/154	9.45/240	5.12/130	11.18/284	6.30/160	43
8"	1000	26	9.06/230	7.99/203	10.43/265	7.95/202	12.09/307	7.87/200	81
10"	1500	30	9.84/250	10.00/254	11.61/295	9.25/235	13.27/337	7.87/200	102
12"	2500	36	10.63/270	12.01/305	13.39/340	11.02/280	15.43/392	9.84/250	132
14"	3200	40	11.42/290	13.27/337	15.08/383	12.40/315	17.13/435	11.81/300	164
16"	4800	45	12.20/310	15.24/387	16.81/427	13.98/355	18.94/481	15.75/400	193
18"	6500	50	12.99/330	17.24/438	18.39/467	14.57/370	20.51/521	15.75/400	238
20"	8500	55	13.78/350	19.25/489	19.65/499	15.98/406	22.36/568	17.72/450	302
24"	13500	65	15.35/390	23.27/591	24.33/618	18.27/464	27.13/689	19.69/500	457
28"	24000	85	16.93/430	27.24/692	29.33/745	22.05/560	35.55/903	23.62/600	810
32"	28000	85	18.50/470	31.26/794	31.85/809	24.80/630	38.07/967	23.62/600	1093
36"	42000	100	20.08/510	35.24/895	34.37/873	27.44/697	40.55/1030	23.62/600	1410

BU365^H -300Lb C.P.R.VButt-welded multi-level three-eccentric metal hard-sealed butterfly valve

Nominal diameter NPS	Output Torque N.m (Including Safety Factor)	Maximum stem Diameter mm	L(inch/mm)	d1(inch/mm)	H1(inch/mm)	H2(inch/mm)	H(inch/mm)	D0(inch/mm)	Approximate weight(kg)
3"	230	18	7.09/180	2.99/76	9.53/242	4.25/108	11.26/286	6.30/160	35
4"	360	18	7.48/190	4.02/102	8.03/204	4.25/108	9.76/248	6.30/160	38
6"	1000	26	8.27/210	6.02/153	10.20/259	5.31/135	11.85/301	7.87/200	45
8"	1900	30	9.06/230	7.99/203	10.87/276	5.31/202	11.85/318	7.87/200	100
10"	3400	40	9.84/250	10.00/254	12.32/313	9.25/235	14.37/365	9.84/250	135
12"	5500	45	10.63/270	12.01/305	14.29/363	11.02/280	16.34/415	11.81/300	260
14"	7000	50	11.42/290	13.27/337	15.98/406	12.40/315	18.03/458	15.75/400	280
16"	10000	55	12.20/310	15.24/387	17.36/441	13.98/355	20.08/510	17.72/450	320
18"	13500	65	12.99/330	17.01/432	20.59/523	14.57/370	23.27/591	19.69/500	500
20"	18500	75	13.78/350	19.02/483	23.70/602	16.54/420	29.13/740	23.62/600	550
24"	30000	85	15.35/390	22.99/584	27.36/695	19.29/490	32.80/833	23.62/600	900

Double flange and double clamp multi-level three-eccentric metal hard-sealed butterfly valves



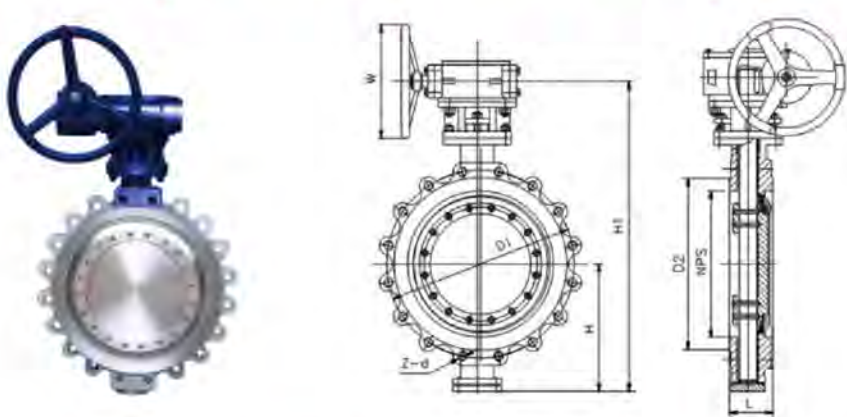
BU3⁴_{5W}^H-150Lb C.P.R.V Flanged, clamp, multi-level, three-eccentric metal hard-sealed butterfly valve

Nominal Path NPS	Output Torque N.m (Including Safety Factor)	Maximum stem diameter mm	Structural Length (Standard Value)		Shape size (reference value)		Connection Size (Standard Value)				
			L (inch/mm)	L1 (inch/mm)	H (inch/mm)	H1 (inch/mm)	D (inch/mm)	D1 (inch/mm)	D2 (inch/mm)	M	Z-d
3"	120	18	1.88/48	4.50/114	4.92/125	14.96/380	7.50/190	6.00/152.4	5.00/127	5/8UNC	8-19
4"	180	18	2.12/54	5.00/127	5.70/145	16.34/415	9.00/229	7.50/190.5	6.19/157	5/8UNC	8-19
6"	500	22	2.25/57	5.50/140	6.89/175	21.45/545	11.00/279	9.50/241.3	8.50/216	3/4UNC	8-22
8"	1000	26	2.50/64	6.00/152	8.26/210	24.21/645	13.50/343	11.75/298.5	10.62/270	3/4UNC	8-22
10"	1500	30	2.81/71	6.50/165	9.84/250	27.36/695	16.00/406	14.25/362	12.75/324	7/8UNC	12-25
12"	2500	36	3.19/81	7.00/178	11.24/285	32.78/830	19.00/483	17.00/431.8	15.00/381	7/8UNC	12-25
14"	3200	40	3.62/92	7.50/190	12.60/320	35.43/900	21.00/533	18.75/476.3	16.25/413	1UNC	12-29
16"	4800	45	4.00/102	8.50/216	13.98/355	38.58/980	23.50/597	21.25/539.8	18.50/470	1UNC	16-29
18"	6500	50	4.50/114	8.75/222	14.96/380	40.55/1030	25.00/635	22.75/577.9	21.00/533	1 1/8UN	16-32
20"	8500	55	5.00/127	9.00/229	16.34/415	43.70/1110	27.50/699	25.00/635	23.00/584	1 1/8UN	20-32
24"	13500	65	6.06/154	10.50/267	18.70/475	51.37/1305	32.00/813	29.50/749.3	27.25/692	1 1/4UN	20-35
30"	24000	85	6.50/165	12.52/318	22.38/580	60.03/1525	38.75/985	36.00/914.4	33.75/857	1 1/4UN	28-35
32"	28000	85	7.50/190	12.52/318	24.80/630	62.40/1585	41.75/1060	38.50/977.9	36.00/914	1 1/2UN	28-42
36"	42000	100	8.00/203	12.99/330	26.77/680	69.48/1765	46.00/1170	42.75/1085.8	40.25/1022	1 1/2UN	32-42

BU3⁴_{5W}^H-300Lb C.P.R.V Flanged, clamp, multi-level, three-eccentric metal hard-sealed butterfly valve

Nominal Path NPS	Output Torque N.m (Including Safety Factor)	Output Torque N.m (Including Safety Factor)	Structural Length (Standard Value)		Shape size (reference value)		Connection Size (Standard Value)				
			L (inch/mm)	L1 (inch/mm)	H (inch/mm)	H1 (inch/mm)	D (inch/mm)	D1 (inch/mm)	D2 (inch/mm)	M	Z-d
3"	230	18	1.88/48	4.50/114	4.92/125	14.96/380	8.25/210	6.62/168.3	5.00/127	3/4UNC	8-22
4"	360	18	2.12/54	5.00/127	5.70/145	16.34/415	10.00/255	7.88/200	6.19/157	3/4UNC	8-22
6"	1000	26	2.31/59	5.50/140	6.89/175	21.45/545	12.50/320	10.62/269.9	8.50/216	3/4UNC	12-22
8"	1900	30	2.88/73	6.00/152	8.26/210	24.21/645	15.00/380	12.00/330.2	10.62/270	7/8UNC	12-25
10"	3400	40	3.25/83	6.50/165	9.84/250	27.36/695	17.50/445	15.25/387.4	12.75/324	1UNC	16-29
12"	5500	45	3.62/92	7.00/178	11.24/285	32.78/830	20.50/520	17.25/450.8	15.00/381	11/8 8	16-32
14"	7000	50	4.62/117	7.50/190	12.60/320	35.43/900	23.00/585	20.25/514.4	16.25/413	11/8 8UN	20-32
16"	10000	55	5.25/133	8.50/216	13.98/355	38.58/980	25.50/650	22.50/571.5	18.50/470	11/4 8UN	20-35
18"	13500	65	5.88/149	8.74/222	14.96/380	40.55/1030	28.00/710	24.75/628.6	21.00/533	11/4 8UN	24-35
20"	18500	75	6.25/159	9.00/229	16.34/415	43.70/1110	30.50/775	27.00/685.8	23.00/584	11/4 8UN	24-35
24"	30000	85	7.12/181	10.50/267	18.70/475	51.37/1305	36.00/915	32.00/812.8	27.25/692	11/28UN	24-41
30"	53000	100	7.87/200	11.50/318	22.38/580	60.03/1525	43.00/1092	39.25/997	33.75/857	13/4 8UN	28-48
36"	95000	120	9.50/241	12.99/330	26.77/680	69.48/1765	50.00/1270	46.00/1168.4	40.25/1022	2 8UN	32-54

Butterfly Valve with Lug Multi-level and Three-eccentricity Metal Hard Seal



BU385^H_W-150Lb C.P.R.V Butterfly Valve with Lug Type and Multi-Level Three-Eccentricity Metal Hard Seal

Nominal Path NPS	Output Torque N.m (Including Safety Factor)	Maximum stem diameter mm	Structural Length (Standard Value)	Shape size (reference value)		Connection Size (Standard Value)			
				L(inch/mm)	H(inch/mm)	H1(inch/mm)	D1(inch/mm)	D2(inch/mm)	M
6"	500	22	2.25/57	6.89/175	21.45/545	9.50/241.3	8.50/216	3/4UNC	8-22
8"	1000	26	2.50/64	8.26/210	24.21/645	11.75/298.5	10.62/270	3/4UNC	8-22
10"	1500	30	2.81/71	9.84/250	27.36/695	14.25/362	12.75/324	7/8UNC	12-25
12"	2500	36	3.19/81	11.24/285	32.78/830	17.00/431.8	15.00/381	7/8UNC	12-25
14"	3200	40	3.62/92	12.60/320	35.43/900	18.75/476.3	16.25/413	1UNC	12-29
16"	4800	45	4.00/102	13.98/355	38.58/980	21.25/539.8	18.50/470	1UNC	16-29
18"	6500	50	4.50/114	14.96/380	40.55/1030	22.75/577.9	21.00/533	1 1/8UN	16-32
20"	8500	55	5.00/127	16.34/415	43.70/1110	25.00/635	23.00/584	1 1/8UN	20-32
24"	13500	65	6.06/154	18.70/475	51.37/1305	29.50/749.3	27.25/692	1 1/4UN	20-35
30"	24000	85	6.50/165	22.38/580	60.03/1525	36.00/914.4	33.75/857	1 1/4UN	28-35
36"	42000	100	8.00/203	26.77/680	69.48/1765	42.75/1085.8	40.25/1022	1 1/2UN	32-42

BU385^H_W-300Lb C.P.R.V Butterfly Valve with Lug Type and Multi-Level Three-Eccentricity Metal Hard Seal

Nominal Path NPS	Output Torque N.m (Including Safety Factor)	Maximum stem diameter mm	Structural Length (Standard Value)	Shape size (reference value)		Connection Size (Standard Value)			
			L(inch/mm)	H(inch/mm)	H1(inch/mm)	D1(inch/mm)	D2(inch/mm)	M	Z-d
6"	1000	26	2.31/59	6.89/175	21.45/545	10.62/269.9	8.50/216	3/4UNC	12-22
8"	1900	30	2.88/73	8.26/210	24.21/645	12.00/330.2	10.62/270	7/8UNC	12-25
10"	3400	40	3.25/83	9.84/250	27.36/695	15.25/387.4	12.75/324	1UNC	16-29
12"	5500	45	3.62/92	11.24/285	32.78/830	17.25/450.8	15.00/381	11/8 8	16-32
14"	7000	50	4.62/117	12.60/320	35.43/900	20.25/514.4	16.25/413	11/8 8UN	20-32
16"	10000	55	5.25/133	13.98/355	38.58/980	22.50/571.5	18.50/470	11/4 8UN	20-35
18"	13500	65	5.88/149	14.96/380	40.55/1030	24.75/628.6	21.00/533	11/4 8UN	24-35
20"	18500	75	6.25/159	16.34/415	43.70/1110	27.00/685.8	23.00/584	11/4 8UN	24-35
24"	30000	85	7.12/181	18.70/475	51.37/1305	32.00/812.8	27.25/692	11/28UN	24-41
30"	53000	100	7.87/200	22.38/580	60.03/1525	39.25/997	33.75/857	13/4 8UN	28-48
36"	95000	120	9.50/241	26.77/680	69.48/1765	46.00/1168.4	40.25/1022	2 8UN	32-54